IN THE CLAIMS

1. (original) A cDNA encoding a polypeptide comprising an amino acid sequence selected from the group consisting of (a) the amino acid sequences shown in SEQ ID NOS:2, 10, and 11 and (b) biologically active variants thereof.

2. (original) The cDNA of claim 1 which comprises a nucleotide sequence selected from the group consisting of SEQ ID NOS:1 and 9.

3. (original) The cDNA of claim 1 which consists of a nucleotide sequence selected from the group consisting of SEQ ID NOS:1 and 9.

4. (original) An expression vector comprising a polynucleotide which encodes a polypeptide comprising an amino acid sequence selected from the group consisting of (a) the amino acid sequences shown in SEQ ID NOS:2, 10, and 11 and (b) biologically active variants thereof.

5. (original) The expression vector of claim 4 wherein the polynucleotide comprises a nucleotide sequence selected from the group consisting of SEQ ID NOS:1 and 9.

6. (original) The expression vector of claim 4 wherein the polynucleotide consists of a nucleotide sequence selected from the group consisting of SEQ ID NOS:1 and 9.

7. (original) A host cell comprising an expression vector which encodes a polypeptide comprising an amino acid sequence selected from the group consisting of (a) the amino acid sequences shown in SEQ ID NOS:2, 10, and 11 and (b) biologically active variants thereof.

8. (original) The host cell of claim 7 wherein the polynucleotide comprises a nucleotide sequence selected from the group consisting of SEQ ID NOS:1 and 9.

9. (original) The host cell of claim 7 wherein the polynucleotide consists of a nucleotide sequence selected from the group consisting of SEQ ID NOS:1 and 9.

10. (original) A purified polypeptide comprising an amino acid sequence selected from the group consisting of (a) the amino acid sequences shown in SEQ ID NOS:2, 10, and 11 and (b) biologically active variants thereof.

11. (original) The purified polypeptide of claim 10 which comprises the amino acid sequence shown in SEQ ID NO:2.

12. (original) The purified polypeptide of claim 10 which comprises the amino acid sequence shown in SEQ ID NO:10.

13. (original) The purified polypeptide of claim 10 which comprises the amino acid sequence shown in SEQ ID NO:11.

14. (original) A fusion protein comprising a polypeptide consisting of an amino acid sequence selected from the group consisting of (a) the amino acid sequence shown in SEQ ID NOS:2, 10, or 11 and (b) biologically active variants thereof.

15. (original) The fusion protein of claim 14 wherein the polypeptide consists of an amino acid sequence selected from the group consisting of SEQ ID NOS:2, 10, and 11.

16. (original) A method of producing a polypeptide comprising an amino acid sequence selected from the group consisting of (a) an amino acid sequence selected from the group consisting of SEQ ID NOS:2, 10, and 11 and (b) biologically active variants thereof, comprising the steps of:

culturing a host cell comprising an expression vector that encodes the polypeptide under conditions whereby the polypeptide is expressed; and

isolating the polypeptide.

17. (original) The method of claim 16 wherein the expression vector comprises a nucleotide sequence selected from the group consisting of SEQ ID NOS:1 and 9.

18. (original) A method of detecting a coding sequence for a polypeptide comprising an amino acid sequence selected from the group consisting of (a) the amino acid sequences shown in SEQ ID NOS:2, 10, and 11 and (b) biologically active variants thereof, comprising the steps of:

hybridizing a polynucleotide comprising 11 contiguous nucleotides selected from the group consisting of (a) the complement of a nucleotide sequence selected from the group consisting of SEQ ID NOS:1 and 9, (b) a polynucleotide that hybridizes under stringent conditions to (a), (c) a polynucleotide having a nucleic acid sequence that deviates from the nucleic acid sequences specified in (a) and (c) due to the degeneration of the genetic code, and (d) a polynucleotide that represents a fragment, derivative, or allelic variation of a nucleic acid sequence specified in (a) to (c) to nucleic acid material of a biological sample to form a hybridization complex; and

detecting the hybridization complex.

19. (original) The method of claim 18 further comprising the step of amplifying the nucleic acid material before the step of hybridizing.

20. (original) A kit for detecting a coding sequence for a polypeptide comprising an amino acid sequence selected from the group consisting of (a) an amino acid sequence selected from the group consisting of SEQ ID NOS:2, 10, and 11 and (b) biologically active variants thereof, comprising:

a polynucleotide comprising 11 contiguous nucleotides selected from the group consisting of (a) the complement of a nucleotide sequence selected from the group consisting of SEQ ID NOS:1 and 9, (b) a polynucleotide that hybridizes under stringent conditions to (a), (c) a polynucleotide having a nucleic acid sequence that deviates from the nucleic acid sequences specified in (a) and (c) due to the degeneration of the genetic code, and (d) a polynucleotide that represents a fragment, derivative, or allelic variation of a nucleic acid sequence specified in (a) to (c); and

instructions for the method of claim 18.

21. (original) A method of detecting a polypeptide comprising an amino acid sequence selected from the group consisting of (a) the amino acid sequences shown in SEQ ID NOS:2, 10, and 11 and (b) biologically active variants thereof, comprising the steps of:

contacting a biological sample with a reagent that specifically binds to the polypeptide to form a reagent-polypeptide complex; and

detecting the reagent-polypeptide complex.

22. (original) The method of claim 21 wherein the reagent is an antibody.

23. (original) A kit for detecting a polypeptide comprising an amino acid sequence selected from the group consisting of (a) an amino acid sequence selected from the group consisting of SEQ ID NOS:2, 10, and 11, and (b) biologically active variants thereof, comprising:

an antibody which specifically binds to the polypeptide; and

instructions for the method of claim 21.

24. (original) A method of screening, comprising the steps of:

contacting a test compound with a polypeptide comprising an amino acid sequence selected from the group consisting of (a) the amino acid sequences shown in SEQ ID NOS:2, 10, and 11 and (b) biologically active variants thereof; and

detecting binding of the test compound to the polypeptide, wherein a test compound that binds to the polypeptide is identified as a potential agent for regulating the activity of the polypeptide.

25. (original) The method of claim 24 wherein the step of contacting is in a cell.

26. (original) The method of claim 25 wherein the cell is *in vitro*.

27. (original) The method of claim 25 wherein the cell is *in vivo*.

28. (original) The method of claim 24 wherein the step of contacting is in a cell-free system.

29. (original) The method of claim 24 wherein the polypeptide comprises a detectable label.

30. (original) The method of claim 24 wherein the test compound comprises a detectable label.

31. (original) The method of claim 24 wherein the polypeptide is bound to a solid support.

32. (original) The method of claim 24 wherein the test compound is bound to a solid support.

33. (original) A method of screening, comprising the steps of:

contacting a test compound with a polypeptide comprising an amino acid sequence selected from the group consisting of (a) the amino acid sequences shown in SEQ ID NOS:2, 10, and 11 and (b) biologically active variants thereof; and

detecting the enzymatic activity of the polypeptide, wherein a test compound that increases the enzymatic activity of the polypeptide is identified as a potential therapeutic agent for increasing the enzymatic activity of the polypeptide, and wherein a test compound that decreases the enzymatic activity of the polypeptide is identified as a potential therapeutic agent for decreasing the enzymatic activity of the polypeptide.

34. (original) The method of claim 33 wherein the step of contacting is in a cell.

35. (original) The method of claim 34 wherein the cell is *in vitro*.

36. (original) The method of claim 34 wherein the cell is *in vivo*.

37. (original) The method of claim 33 wherein the step of contacting is in a cell-free system.

38. (original) A method of screening, comprising the steps of:

contacting a test compound with a product encoded by a polynucleotide comprising a nucleotide sequence selected from the group consisting of (a) the amino acid sequences shown in SEQ ID NOS:2, 10, and 11 and (b) biologically active variants thereof; and

detecting binding of the test compound to the product, wherein a test compound that binds to the product is identified as a potential therapeutic agent for regulating the activity of the product.

39. (original) The method of claim 38 wherein the product is a polypeptide.

40. (original) The method of claim 38 wherein the product is an RNA.

41. (original) A method of reducing an activity of a human protein, comprising the step of:

contacting a cell comprising the human protein comprising an amino acid sequence shown in SEQ ID NOS:2, 10, or 11 with a reagent that specifically binds to a product encoded by a polynucleotide comprising a nucleotide sequence selected from the group consisting of (a) the amino acid sequences shown in SEQ ID NOS:2, 10, and 11 and (b) biologically active variants thereof, whereby the activity of the human protein is reduced.

42. (original) The method of claim 41 wherein the product is a polypeptide.

43. (original) The method of claim 42 wherein the reagent is an antibody.

44. (original) The method of claim 41 wherein the product is an RNA.

45. (original) The method of claim 44 wherein the reagent is an antisense oligonucleotide.

. (original) The method of claim 44 wherein the reagent is a ribozyme.

47. (original) The method of claim 41 wherein the cell is *in vitro*.

48. (original) The method of claim 41 wherein the cell is *in vivo*.

49. (original) A pharmaceutical composition, comprising:

a reagent that specifically binds to a polypeptide comprising an amino acid sequence selected from the group consisting of (a) amino acid sequences shown in SEQ ID NOS:2, 10, and 11 and (b) biologically active variants thereof; and

a pharmaceutically acceptable carrier.

50. (original) The pharmaceutical composition of claim 49 wherein the reagent is an antibody.

51. (original) A pharmaceutical composition, comprising:

a reagent that specifically binds to a product of a polynucleotide comprising a coding sequence selected from the group consisting of (a) the amino acid sequences shown in SEQ ID NOS:2, 10, and 11 and (b) biologically active variants thereof; and

a pharmaceutically acceptable carrier.

52. (original) The pharmaceutical composition of claim 51 wherein the reagent is a ribozyme.

53. (original) The pharmaceutical composition of claim 51 wherein the reagent is an antisense oligonucleotide.

54. (original) The pharmaceutical composition of claim 51 wherein the reagent is an antibody.

55. (original) A pharmaceutical composition, comprising:

an expression vector encoding a polypeptide comprising an amino acid sequence selected from the group consisting of (a) the amino acid sequences shown in SEQ ID NOS:2, 10, and 11 and (b) biologically active variants thereof; and

a pharmaceutically acceptable carrier.

56. (original) The pharmaceutical composition of claim 55 wherein the expression vector comprises a nucleotide sequence selected from the group consisting of SEQ ID NOS:1 and 9.

57. (original) A method of treating a disorder selected from the group consisting of a cancer, an allergy, a CNS disorder, and an autoimmune disease, comprising the step of:

administering to a patient in need thereof a therapeutically effective dose of a reagent that inhibits a function of a human protein, wherein the human protein comprises an amino acid sequence selected from the group consisting of (a) the amino acid sequences shown in SEQ ID NOS:2, 10, and 11 and (b) biologically active variants thereof, whereby symptoms of the disorder are ameliorated.

58. (original) The method of claim 57 wherein the reagent is identified by the method of claim 24.

59. (original) The method of claim 57 wherein the reagent is identified by the method of claim 33.

. (original) The method of claim 57 wherein the reagent is identified by the method of claim 38.

61. (original) An isolated polynucleotide selected from the group consisting of: (a) a polynucleotide encoding a protein that comprises the amino acid sequence of SEQ ID NO:2, 10, or 11, (b) a polynucleotide comprising a sequence selected from the group consisting of SEQ ID NOS:1 and 9, (c) a polynucleotide which hybridizes under stringent conditions to a polynucleotide specified in (a) or (b); (d) a polynucleotide having a nucleic acid sequence that deviates from the nucleic acid sequences specified in (a) - (c) due to the degeneration of the genetic code, and (e) a polynucleotide that represents a fragment, derivative, or allelic variation of a nucleic acid sequence specified in (a) - (d).

62. (original) An expression vector comprising the polynucleotide of claim 61.

63. (original) A host cell comprising the expression vector of claim 62.

64. (original) A preparation of antibodies that specifically bind to a polypeptide selected from the group consisting of (a) the amino acid sequence shown in SEQ ID NO:2, 10, or 11 and (b) biologically active variants thereof.

65. (original) An antisense oligonucleotide that hybridizes to a polynucleotide selected from the group consisting of (a) a polynucleotide encoding a protein that comprises the amino acid sequence of SEQ ID NO:2, 10, or 11, (b) a polynucleotide comprising a nucleotide sequence selected from the group consisting of SEQ ID NOS:1 and 9, (c) a polynucleotide which hybridizes under stringent conditions to a polynucleotide specified in (a) or (b), (d) a polynucleotide having a nucleic acid sequence that deviates from the nucleic acid sequences specified in (a) - (c) due to the degeneration of the genetic code, and (e) a polynucleotide that represents a fragment, derivative, or allelic variation of a nucleic acid sequence specified in (a) - (d).

66. (new) A method of inducing apoptosis, comprising:

contacting a cell with a first compound, wherein the first compound is a protein comprising an amino acid sequence selected from the group consisting of the amino acid sequences shown in SEQ ID NOS:2, 10, and 11 and biologically active variants thereof.

67. (new) The method of claim 66 further comprising the step of contacting the cell with a second compound.

68. (new) The method of claim 67 wherein the second compound is an apoptosis-inducing agent.

69. (new) The method of claim 68 wherein the apoptosis-inducing agent is C2 ceramide.

70. (new) The method of claim 68 wherein the apoptosis-inducing agent is C2 ceramide-1-phosphate.

71. (new) The method of claim 66 wherein the cell is *in vitro*.

72. (new) The method of claim 66 wherein the cell is *in vivo*.

73. (new) A method of treatment comprising:

administering to a patient in need thereof a therapeutically effective dose of a therapeutic agent, wherein the therapeutic agent is selected from the group consisting of a protein and an expression vector, wherein the protein comprises an amino acid sequence selected from the group consisting of the amino acid sequences shown in SEQ ID NOS:2, 10, and 11 and biologically active variants thereof, and wherein the expression vector encodes a polypeptide comprising an amino acid sequence selected from the group consisting of (a) the amino acid sequences shown in SEQ ID NOS:2, 10, and 11 and (b) biologically active variants thereof,

wherein the patient has a disorder selected from the group consisting of a transplant rejection, a lymphocytic leukemia, an autoimmune disease, an allergy, an inflammatory disease, a neurodegenerative disease, and a cancer.

74. (new) The method of claim 73 further comprising administering to the patient an apoptosis-inducing agent.

74. (new) A method of screening, comprising the steps of:

contacting a cell expressing a ceramide kinase with a test compound, wherein the ceramide kinase comprises an amino acid sequence selected from the group consisting of the amino acid sequences shown in SEQ ID NOS:2, 10, and 11 and biologically active variants thereof; and

detecting apoptosis of the cell,

wherein a test compound that induces apoptosis is identified as an apoptosis-inducing agent.

75. (new) An apoptosis-inducing agent obtained by the method of claim 74.

76. (new) The method of claim 68 wherein the apoptosis-inducing agent is the apoptosis-inducing agent of claim 75.

Respectfully submitted,

Date: March 22, 2007

By: Lisa M. Hemmendinger

Lisa M. Hemmendinger
Registration No. 42,653

Banner & Witcoff, Ltd.
1001 G Street, N.W., Eleventh Floor
Washington, D.C. 20001-4597
(202) 824-3000